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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/776,770

02/11/2004

George Kadlicko

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EXAMINER

GILLAN, RYAN P

ART UNIT

PAPER NUMBER

3746

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

ED

Office Action Summary

Application No.

10/776,770

Applicant(s)

KADLICKO, GEORGE

Examiner

Ryan P. Gillan

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3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213..

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10/27/06, 8/15/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 5-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Engel (5,490,446). Engel teaches a slipper assembly (22) for a piston assembly (20) of a rotary hydraulic machine, said slipper assembly comprising a base (46) having a planar bearing surface (48) disposed on one side for engagement with a swashplate (16) and a spherical bearing (66) disposed on an oppositely directed side for engagement with a part spherical recess (56) in said piston (20), wherein said piston is tubular; wherein a passageway (72) extends through said spherical bearing and said base; wherein said base includes a spigot (52) projecting from said oppositely directed side and said spherical bearing is received on said spigot (clearly seen in figure 10); wherein said spherical bearing has a through bore (68) to receive said spigot and a counterbore (on the end of bore (68)) to permit enlargement of said spigot to retain said spherical bearing on said spigot; wherein said passageway extends through said spigot (clearly seen in figure 4); wherein said spherical recess has a depth greater than the radius of said spherical bearing and walls of said recess extend beyond an equator of said spherical bearing and conform thereto to secure said spherical bearing in said recess (clearly seen in figure 4); wherein said base of slipper assembly has a diameter greater

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than that of said piston (clearly seen in figure 4) and said slippers are retained in engagement with said swashplate by a plate (18) having a plurality of apertures each of which receives a respective one of said pistons and has a marginal portion overlying a respective one of said bases (clearly seen in figure 4).

3. Claims 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Stoppek et al. (6,431,051). Stoppek teaches A method of forming a piston assembly for a rotary hydraulic machine comprising the steps of forming a part spherical cavity (40) in one end of a piston (10) to an axial depth greater than the diameter of said cavity, inserting therein a complementary spherical bearing (52) of a slipper assembly (50), and deforming the walls of said cavity to conform to the surface of said spherical bearing, wherein said step of deforming said walls includes the step of applying a radial load about the equator of said spherical bearing after said walls conform to said surface. (col. 3 lines 53-62).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engel in view of Ito et al. (6,422,831). Engel teaches all of the above mentioned claim

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limitations but fails to teach the following claim limitations taught by Ito: a hydraulic machine comprising a housing (2), a rotating group rotatably mounted within said housing and including barrel (9) and a plurality of pistons (10) axially slideable in cylinders (9a) in said barrel, and a swashplate assembly (connected to support 6) to engage said pistons and induce reciprocation thereof as said barrel rotates in said housing, a port plate (8) interposed between said barrel and said housing and effective to connect respective ones of said cylinders alternatively with an inlet port and an outlet port (col. 3 lines 2-9), and a slipper assembly (5a) acting between said swashplate and said piston to transfer loads therebetween.

5. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the slipper and piston assemblies of Ito to incorporate the slipper assembly taught by Engel as a means eliminating the sliding friction that exists in other piston assemblies and reduces the precise sizing of the cavity relative to the spherical bearing (Engel, abstract).

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Engel and Ito in view of Kristensen (5,813,315). The combination of Engel and Ito teaches all of the above cited claim limitations, but fails to teach the following claim limitations taught by Kristensen: an annular insert (26) providing a planar face over which said slipper assemblies may slide (col. 5 lines 15-20).

7. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the swash plate surface taught by Engel to incorporate the annular

insert taught by Kristensen as a means of reducing wear and frictional losses
(Kristensen, col. 5 lines 15-20).

Allowable Subject Matter

8. Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan P. Gillan whose telephone number is (571) 272-8381. The examiner can normally be reached on M-F 8am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Stashick can be reached on (571) 272-4561. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RPG



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